

*FIG. 2*

BUILD SIMILAR ITEMS TABLE

RETRIEVE PURCHASE  
HISTORIES FOR ALL  
CUSTOMERS

GENERATE TEMPORARY  
TABLE MAPPING CUSTOMERS  
TO PURCHASED ITEMS

CUSTOMER	PURCHASED ITEMS
USER_A	ITEM_A ITEM_C ...
USER_B	ITEM_C ITEM_D ...
⋮	⋮

GENERATE TEMPORARY  
TABLE MAPPING PURCHASED  
ITEMS TO CUSTOMERS

ITEM	CUSTOMERS WHO PURCHASED ITEM
ITEM_A	USER_B, USER_D ...
ITEM_B	USER_A, USER_F ...
⋮	⋮

IDENTIFY  
POPULAR  
ITEMS

FOR EACH  
(POPULAR\_ITEM,  
OTHER\_ITEM) PAIR,  
COUNT NUMBER OF  
CUSTOMERS IN COMMON

POPULAR_ITEM \ OTHER_ITEM	OTHER_ITEM		
	ITEM_A	ITEM_B	...
POPULAR_A	2	70	...
POPULAR_B	35	0	
⋮			

COMPUTE  
COMMONALITY  
INDEXES

SORT  
OTHER\_ITEMS  
LISTS

FILTER  
OTHER\_ITEMS  
LISTS

TRUNCATE  
OTHER\_ITEMS  
LISTS AND  
STORE IN TABLE

FIG. 3A

BUILD SIMILAR ITEMS TABLE

300  
RETRIEVE QUERY LOG RECORDS

302  
GENERATE TEMPORARY TABLE MAPPING SESSIONS TO VIEWED ITEMS

302A

SESSION	ITEMS VIEWED IN THE SESSION
SESSION_A	ITEM_A ITEM_C ...
SESSION_B	ITEM_C ITEM_D ...
⋮	⋮

304  
GENERATE TEMPORARY TABLE MAPPING VIEWED ITEMS TO SESSIONS

304A

ITEM	SESSIONS IN WHICH ITEM VIEWED
ITEM_A	SESSION_B, SESSION_D ...
ITEM_B	SESSION_A, SESSION_D ...
⋮	⋮

306  
IDENTIFY POPULAR ITEMS

308  
FOR EACH (POPULAR\_ITEM, OTHER\_ITEM) PAIR, COUNT NUMBER OF SESSIONS IN COMMON

308A

	OTHER_ITEM	ITEM_A	ITEM_B	...
POPULAR_ITEM				
POPULAR_A		2	70	
POPULAR_B		35	0	...
⋮				

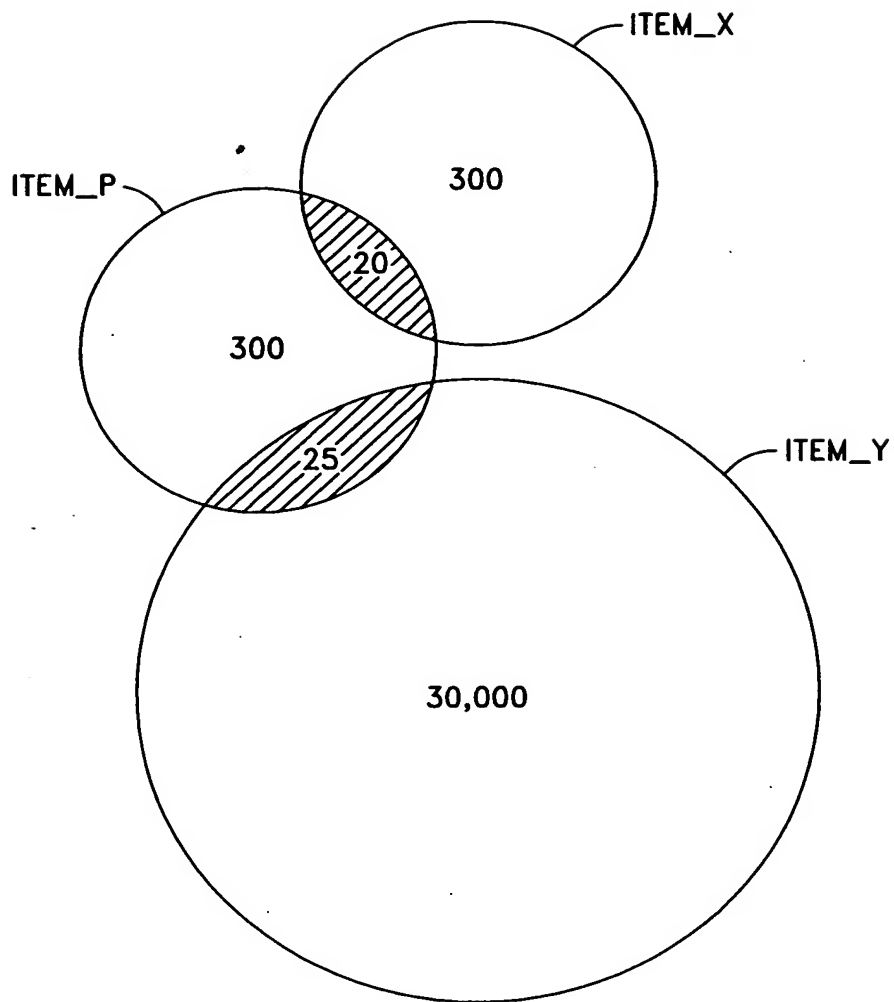
310  
COMPUTE COMMONALITY INDEXES

312  
SORT OTHER\_ITEMS LIST

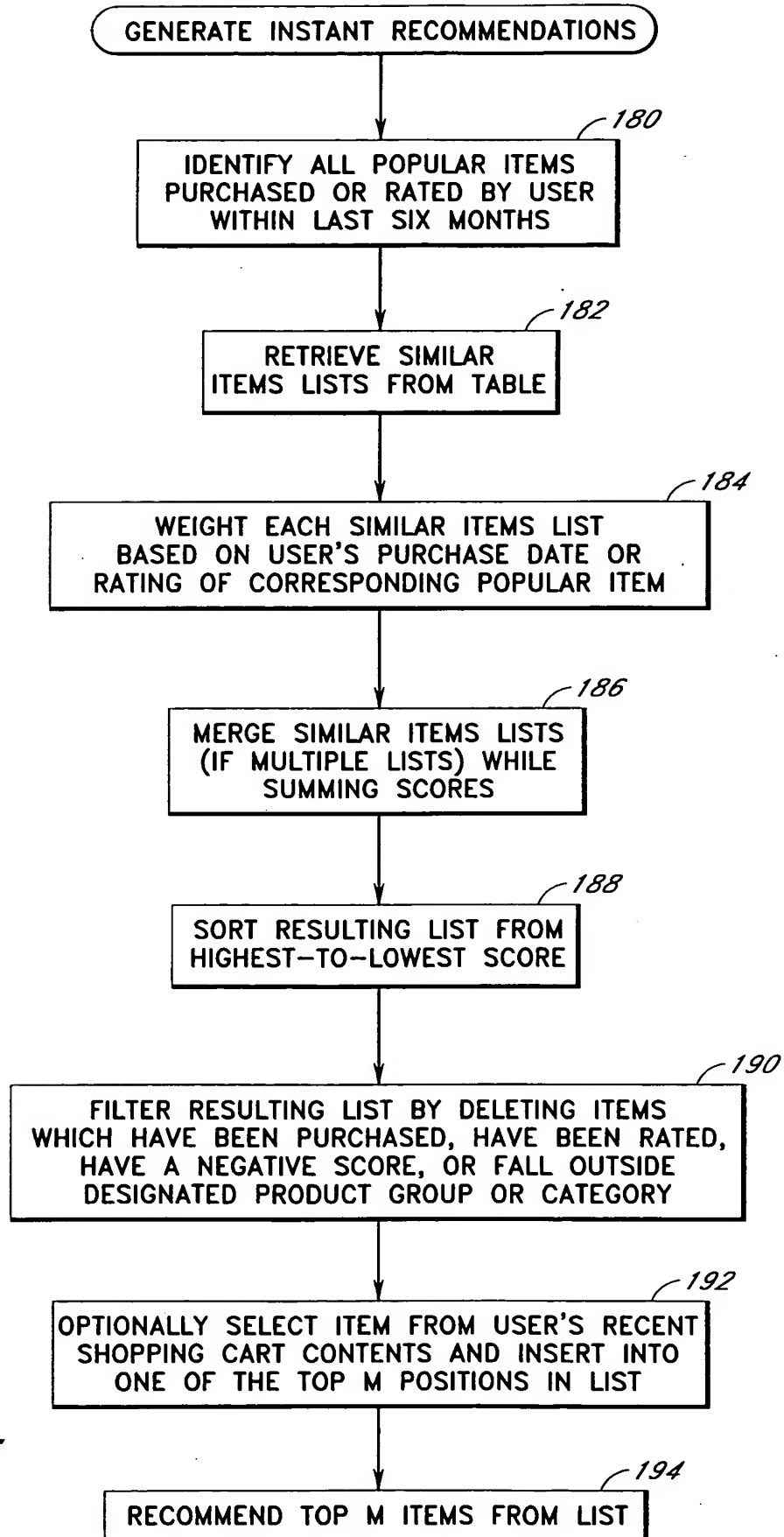
314  
FILTER OTHER\_ITEMS LIST

316  
TRUNCATE OTHER\_ITEMS LISTS AND STORE IN TABLE

FIG. 3B



**FIG. 4**



**FIG. 5**

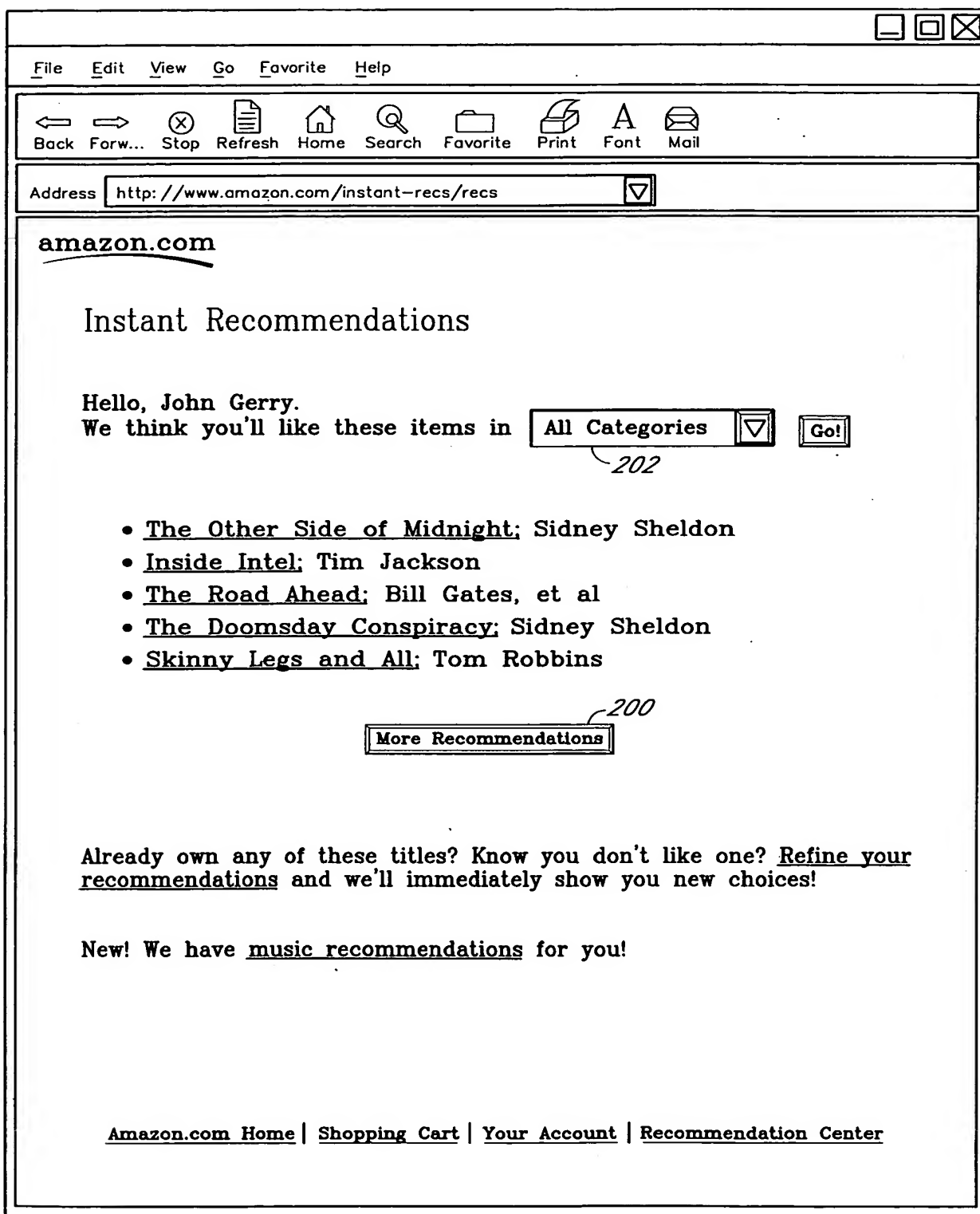
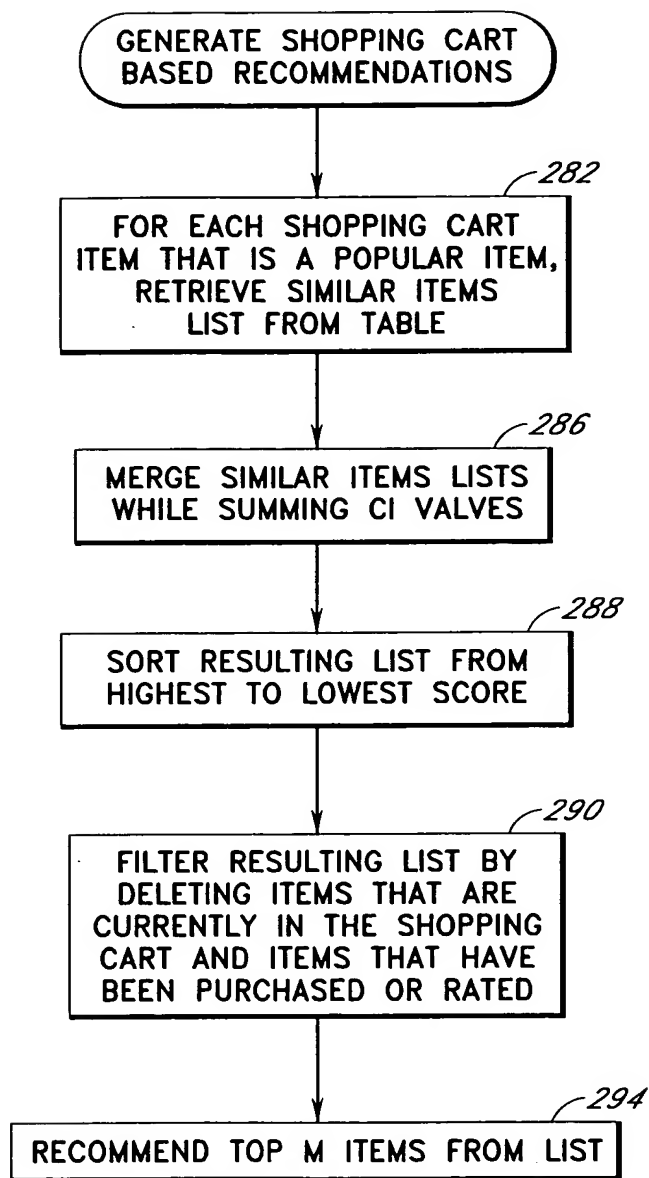


FIG. 6



*FIG. 7*



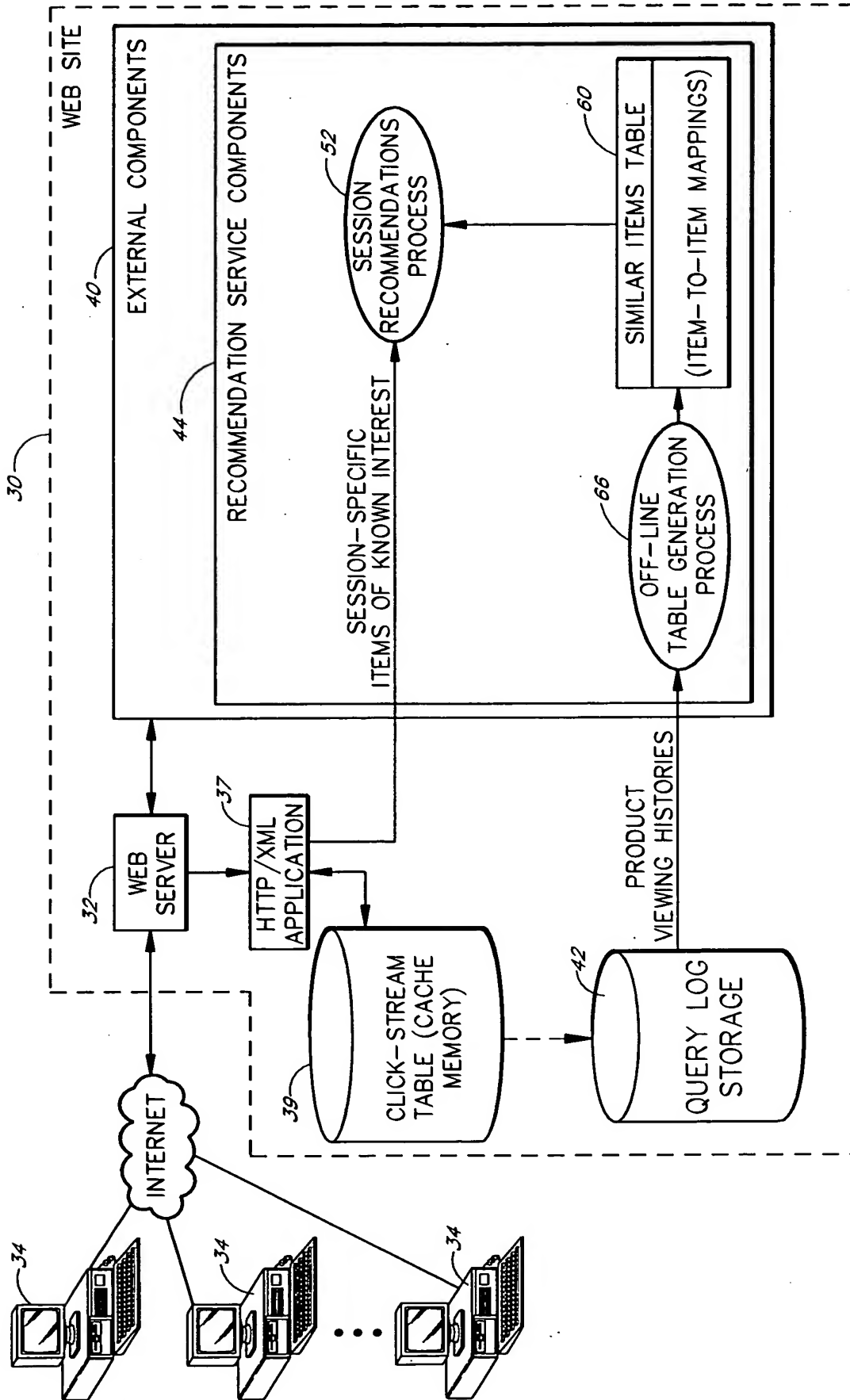


FIG. 8

CLICK STREAM TABLE

SESSION ID	DETAIL PAGE LIST	BROWSE NODE LIST	SEARCH QUERY LIST
1234567	dp1, dp2, dp3, dp4	bn1, bn2, bn3, bn4	"a space odyssey","isaac asimov"

FIG. 9

PAGE-ITEM TABLE

PAGE IDENTIFICATION	ITEM IDENTIFICATION
DP1	"2001: A Space Odyssey"
BN1	"Sony DVP-S360 DVD Player", "Toshiba SD-1600 DVD player," ...

FIG. 10

amazon.com



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⋮

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FIG. 11

amazon.com

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FIG. 12

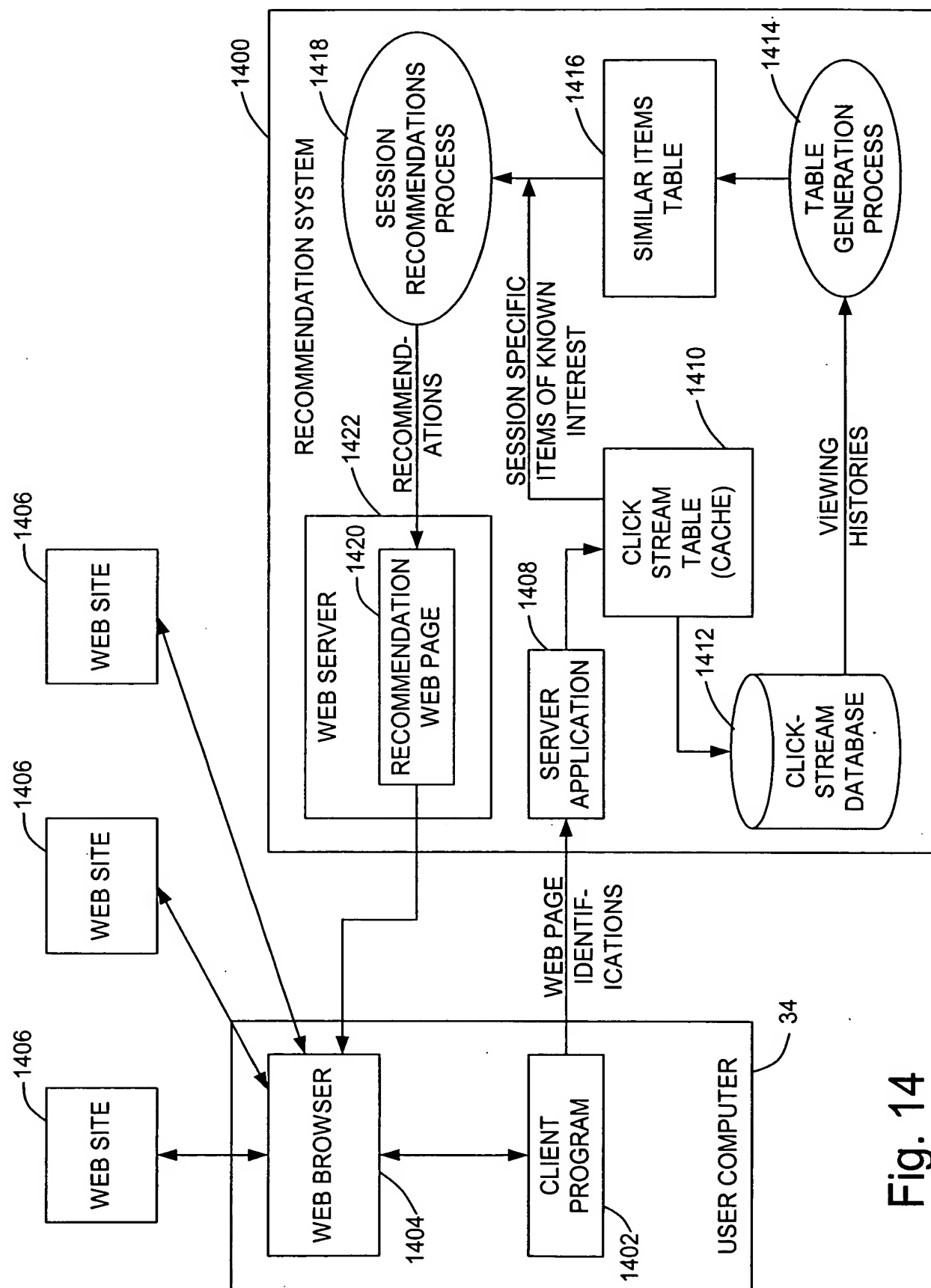
GENERATE RELATED ITEMS  
LIST FOR DISPLAY ON DETAIL  
PAGE OF "POPULAR" PRODUCT

504  
RETRIEVE SIMILAR  
ITEMS LIST  
FOR PRODUCT

506  
OPTIONALLY FILTER SIMILAR  
ITEMS LIST TO REMOVE  
PRODUCTS FALLING OUTSIDE  
PRODUCT CATEGORY OF  
"POPULAR" PRODUCT

508  
DISPLAY N TOP-RANKED  
PRODUCTS FROM FILTERED  
OR UNFILTERED LIST

*FIG. 13*



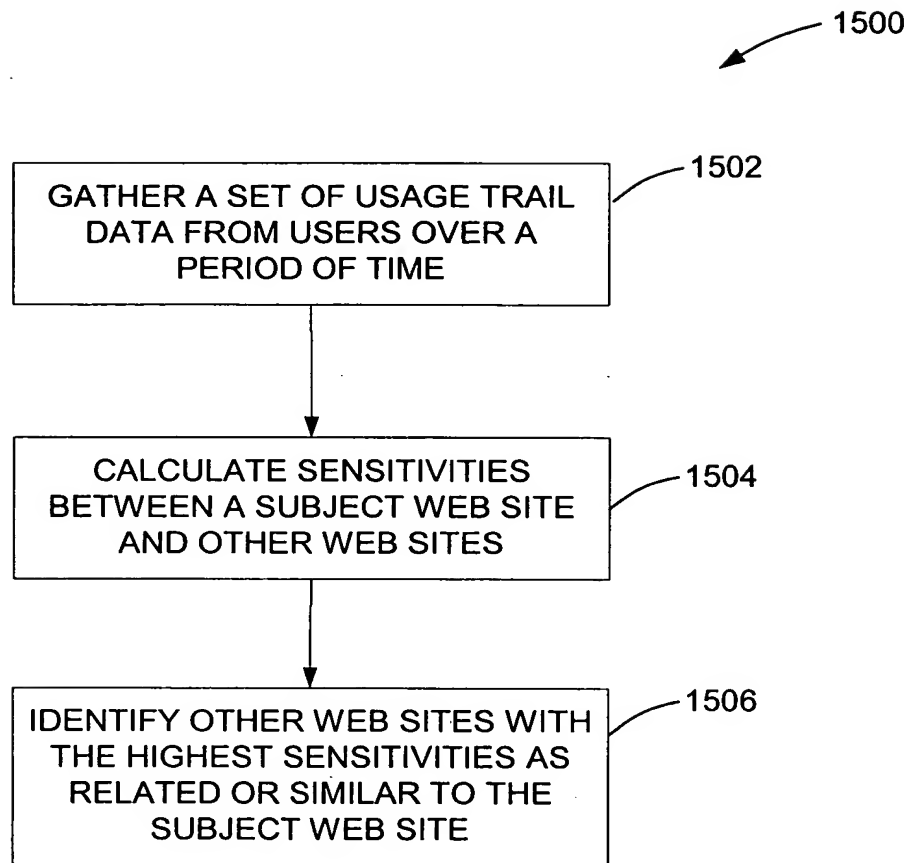


Fig. 15